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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JEE-HONG MIN, HWAN-YOUNG CHOI,  
MOON-GYU LEE, JIN-HWAN KIM,  
and JIN-SEUNG CHOI

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Appeal 2008-4343  
Application 10/824,648  
Technology Center 2800

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Decided: December 9, 2008

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Before BRADLEY R. GARRIS, CHARLES F. WARREN, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the  
Primary Examiner's rejection of claims 1-14. Claims 15-19 have been

indicated as containing allowable subject matter (Final Rejection page no. 1). We have jurisdiction pursuant to 35 U.S.C. § 6.<sup>1</sup>

Appellants' invention is directed to an edge-light type backlight system using a light guide panel and a rod-shaped light source. (Spec. 1). Claim 1 is representative of the invention and is reproduced below:

1. An edge-light type backlight system comprising:

a light guide panel including a light incident surface into which light enters and a light emitting surface from which light is emitted;

a rod-shaped light source which projects light to the light incident surface; and

a polyhedral optical deflector including a first surface and a second surface, the first surface and the second surface on opposite sides of a normal line orthogonal to the light incident surface and being more distant from each other as distance from the light incident surface increases,

wherein the optical deflector is disposed on at least one of the light emitting surface and a surface opposite to the light emitting surface.

#### ISSUES ON APPEAL

Claims 1-14 stand rejected under 35 U.S.C. 5 103(a) over Kraft, U.S. Pat. Application No. 2003/0147259, published on August 7, 2003, in view of Umemoto, U.S. Patent No. 6,616,289, issued September 9, 2003.

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<sup>1</sup> In rendering this decision, we have considered the Appellants' arguments presented in the Appeal Brief dated May 14, 2007 and the Reply Brief dated November 21, 2007. An Oral Hearing for this Appeal was held on November 5, 2008.

The Examiner contends that Kraft discloses an edge-light type backlight system comprising a light guide panel including a light incident surface into which light enters and a light emitting surface from which light is emitted. Kraft fails to teach backlight system using a rod-shaped light source. The Examiner contends that Umemoto teaches the use of a rod-shaped light source used with a backlight system. The Examiner concluded that a person of ordinary skill in the art would have utilized the rod-shaped light of Umemoto with the device of Kraft, since the use of point source lights and rod/tube lights are equivalents in the art. (Ans. 3).

Appellants contend that the combination of Kraft and Umemoto does not teach or suggest a rod-shaped light source which projects light into the light incident surface because paragraph [0038] of Kraft teaches away from using a rod-shaped light.<sup>2</sup> (App. Br. 9; Reply Br. 5).

The issue presented is: did Appellants identify reversible error in the Examiner's rejection of claim 1 under § 103? We answer this question in the negative. The issue turns on whether it would have been obvious to a person of ordinary skill in the art to utilize a rod-shaped light with the device of Kraft.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner

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<sup>2</sup> Appellants have grouped their arguments for claims 1-9 together. While Appellants separately address claims 10-14, Appellants rely on the reasons presented in rebuttal to the Examiner's rejection of claim 1. (App. Br. 11). Consequently, the appealed claims stand or fall with claim 1. Our analysis will be limited thereto.

that the claimed subject matter is not patentable within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection.

#### OPINION

We determine the following Findings of Fact (FF) from the record presented in this appeal:

- (1) Kraft discloses an edge-light type backlight system comprising a light guide panel including a light incident surface (Fig 1) into which light enters and a light emitting surface (Fig 1) from which light is emitted. (Kraft [0034]).
- (2) Kraft discloses “[t]he subject invention was created to replace fluorescent lighting luminaires or applications with a remote light source device to overcome the space requirements, heat production, maintenance requirements, and application limitations of common light sources.” (Kraft [0036]).
- (3) Kraft discloses “[l]ight entering the tapered light guide injection can be from any light source and can be conducted by any fiber optic or light pipe system.” (Kraft [0037]).
- (4) Umemoto discloses the use of a rod-shaped light source in a backlight system. (column 8, ll. 29-54)

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such

that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007) (citing 35 U.S.C. § 103 (a)). The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) secondary considerations, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). See also *KSR*, 127 S. Ct. at 1734.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S. Ct. at 1739. The question to be asked is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR*, 127 S. Ct. at 1740.

Applying the preceding legal principles to the Factual Findings (FF) in the record of this appeal, we determine that the Examiner has established a prima facie case of obviousness, which prima facie case has not been adequately rebutted by Appellants’ arguments. As shown by FF (3) above, a person of ordinary skill in the art would have recognized that the light entering the tapered light guide injection can be from any light source. A person of ordinary skill in the art would have also recognized that a light source such as a rod shaped light source of Umemoto would have been suitable for the invention of Kraft. (FF(1-4)). In fact, Appellants acknowledge that Kraft contemplates the use of any light source for the disclosed invention. (Reply Br. 5).

Moreover, the claimed invention utilizes the transitional term “comprising,” this language opens the claims to include other components such as light guides.<sup>3</sup> Thus, the claimed invention does not exclude a system that utilizes a rod-shaped light source that provides light to the light guides. Further, a person of ordinary skill in the art would have recognized that a rod-shaped light source could have been used adjacent to the backlight system if one were willing to accept the drawbacks that were associated with placing the light source adjacent to the backlight system. (FF (2)).

For the foregoing reasons and those stated in the Answer, we affirm the rejection presented in this appeal.

ORDER

The rejection of claims 1-14 under 35 U.S.C. § 103(a) is affirmed.

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<sup>3</sup>. The transitional term “comprising” opens claim 1 to encompass any additional layers and materials. *See, e.g., Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1383 (Fed. Cir. 2000).

Appeal 2008-4343  
Application 10/824,648

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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